ANNUAL REPORT

for the fiscal year
ending March 31, 1999

Department of Agriculture and Marketing

During this reporting period

Minister
the Honourable Edward F. Lorraine

Deputy Minister
Alan Steel

100-06879/

His Honour
The Honourable J. James Kinley
Lieutenant Governor of Nova Scotia

May It Please Your Honour:

I have the honour to submit the annual report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1999.

Respectfully submitted,

Ernest L. Fage

Ernest L. Fage
Minister

The Honourable Ernest L. Fage
Minister of Agriculture and Marketing

Dear Sir:

I have the honour of presenting the annual report of the Department of Agriculture and Marketing for the fiscal year ending March 31, 1999.

Respectfully submitted,

Alan Steel
Deputy Minister

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DEPARTMENT FUNCTIONS

MISSION STATEMENT

To encourage the development of a viable and sustainable agriculture and food industry for the betterment of Nova Scotians.

CORE FUNCTIONS

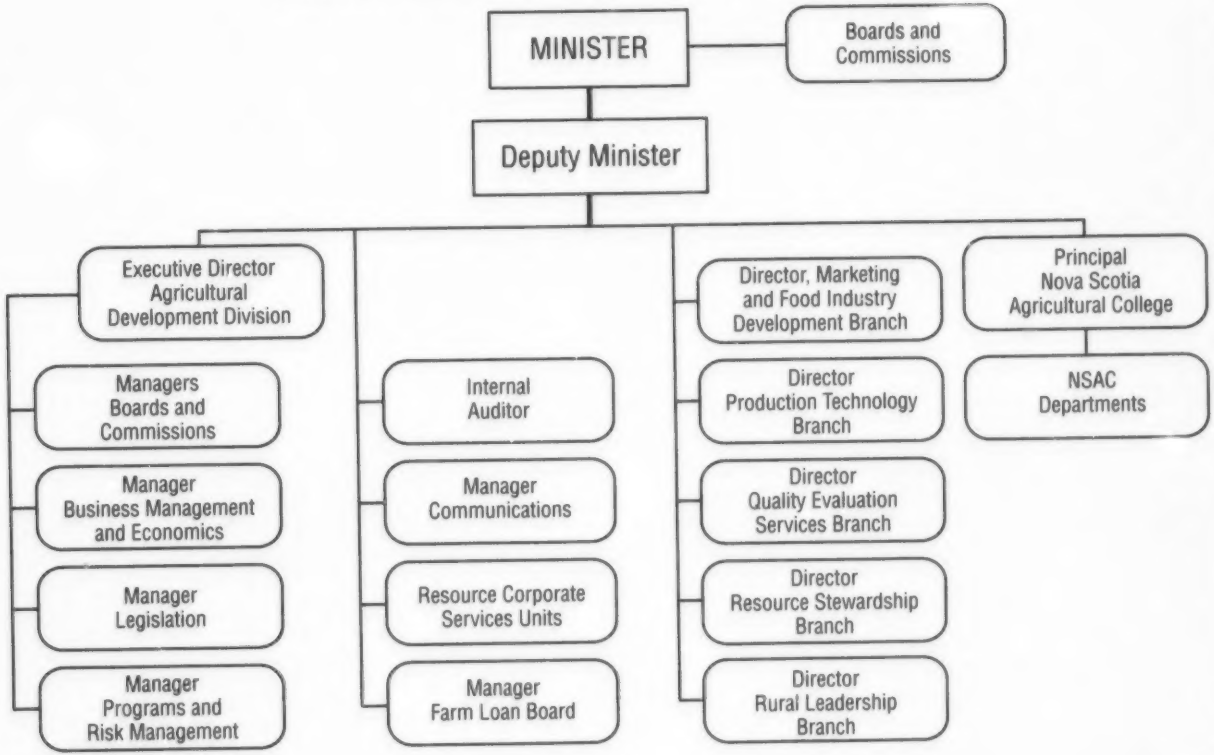
The department's core business functions provide the foundation for the department's programs and services. They are:

- agri-business development: providing developmental resources to increase the competitiveness of the agri-business sector
- education and lifelong learning: developing people through agricultural learning opportunities, both through technical, undergraduate, and graduate courses at the Nova Scotia Agricultural College and through a wide selection of extension, distance, and continuing education opportunities
- resource stewardship: encouraging the best available resource management practices to ensure sustainable and sound environmental farm management practices

STRATEGIC GOALS

- Agri-Business Development: to encourage the competitiveness of the agriculture and food industry so that new employment and income opportunities can be created
- Education and Lifelong Learning: to provide leadership in the development of human resources for agriculture, food, and rural communities
- Resource Stewardship: to foster an environmentally responsible and sustainable agriculture and food industry

DEPARTMENT ORGANIZATION 1998–99



DEPARTMENT OVERVIEW

Agricultural Development Division was created when the Business Development Branch and Policy Secretariat merged on April 1, 1998. It works with industry to provide advice and direction on developing policy, planning, and program initiatives to create an environment of growth for agri-business in Nova Scotia. It is responsible for coordinating the department's business planning process, economic and policy analysis, development and administration of farm stabilization and development assistance programs, farm management initiatives and department legislation. Staff work with other provincial government agencies, the federal government, non-government agencies and organizations, and other stakeholders in the agriculture and agri-food industries to develop programs and coordinate their implementation.

Marketing and Food Industry Development Branch encourages the development of a market-responsive, viable, and sustainable agriculture and food industry. Branch activities focus on: identifying, developing, and promoting opportunities and markets for the sale of Nova Scotia products, services and technologies; and product and quality development initiatives for the agri-food sector. The branch provides its clients with marketing information, services, and advice related to developing and marketing their products and businesses (i.e., agri-food market research and information, development of marketing strategies, marketing education, coordination of trade activities, and facilitation of market-oriented teams within government and industry).

Production Technology Branch provides the leadership and technology necessary to sustain and promote growth in livestock, livestock feeds, and horticultural crops. Crop and livestock specialists and engineers have been integrated into this branch to work together on the production needs of clients. The branch provides "one-stop" service for production agriculture. Branch staff focus on delivering timely technical information to clients, assisting in the development of new production initiatives, conducting applied research, and developing innovative applications to increase production. Staff are available to clients to provide advice for specific problems — one-on-one with producers or through a team approach. The branch is a key link for producers in getting the information and advice they require in all aspects of production.

Quality Evaluation Branch provides leadership in the production and distribution of food through education, consultations, regulations, and analytical and quality evaluation services. All laboratory analytical services, including the veterinary diagnostic, dairy, and crop labs, are consolidated in this branch to enhance service delivery and eliminate duplication. The branch is also responsible for provincial food inspection regulations made under the Health Act, and providing health services to livestock owners to further enhance quality evaluation services. Branch staff also ensure health and hygiene standards are met in all 5,000 provincial food processing, distribution, and service facilities through provincial food inspectors.

Resource Stewardship Branch promotes the development of a sustainable agriculture and food industry through the use of sustainable resource and farm management practices. Staff focus on mediating the compatible use of agricultural resources; environmental training and education for department staff, the industry and the general public; proactive and reactive environmental research and adaptive technology; and expertise in the development of programs, policies, and legislation that support sustainable agriculture. The branch is also responsible for maintaining the province's dykeland system.

Rural Leadership Branch offers high-quality advice, information, services, and education programs to farmers, farm and rural organizations, agri-businesses, and the general public to enhance the viability of the agriculture and food industry and the quality of life of its clients. The branch works through a 12-county office network of agricultural representatives and 4-H and rural organizations specialists across the province. Staff focus on coordinating the delivery of extension and training programs and fostering future agriculture leaders; developing and promoting the economic viability of investing in agriculture; assisting clients in accessing information and specialized services that will help encourage the growth of their agri-business; and coordinating the development and delivery of agricultural awareness programming on behalf of the department and industry.

The Nova Scotia Agricultural College is an education and research leader in the field of agriculture and food and related disciplines. Since its establishment in 1905, the NSAC has provided a progressive education to future agricultural leaders — including producers, agri-entrepreneurs, teachers, researchers, and extension specialists. The faculty, facilities, and programs reflect a broad, diversified, and integrated approach to life sciences, especially those dealing with agriculture and food, including aquaculture, engineering, and landscape horticulture. The NSAC, known as a leading academic institution for agricultural-related studies, has increasingly sought international

partners for projects that would enhance students' educational experience. In the past, federal-provincial agreement programs provided a major source of research funding. However, industry-government funding partnerships are quickly becoming the norm.

Each year, approximately 900 students enroll in the NSAC's diploma, degree, and graduate programs on a full-time basis. All degrees are awarded in association with Dalhousie University; Environmental Engineering is available as part of the two-year engineering program leading to the B.Eng. degree granted by DalTech.

Internal Audit Services is an independent appraisal function that examines and evaluates activities that have financial implications for the department. The objective of Internal Audit is to assist the Deputy Minister and department management in effectively discharging their responsibilities by advising them on the efficiency and effectiveness of management policies, practices, procedures, and controls, and by recommending improvements. This section functions under the policies established by the provincial government and the Department of Agriculture and Marketing, with general direction being provided by the Deputy Minister and the department's Audit Committee.

Various boards and commissions report to the Minister of Agriculture and Marketing. The Nova Scotia Farm Loan Board and the Nova Scotia Crop and Livestock Insurance Commission are required to publish independent annual reports. Consult these reports for information pertaining to their functions, programs, and services.

PERFORMANCE FOR 1998–99

AGRI-BUSINESS DEVELOPMENT

- Handled a 12 per cent increase in producer accounts under the Net Income Stabilization Account (NISA) Program. NISA has become a significant part of producers' risk management strategy in Nova Scotia. Withdrawal from NISA accounts have tripled as a result of successive years of weather- and market-related farm losses.
- Administered the NISA Mixed Farm Program. Approximately 33 per cent of the province's dairy and poultry producers participated in the program, which covered $5.5 million in eligible net sales from 199 supply-managed farms.
- Offered a payment option through the Beef Performance Program. Thirty-six per cent (468 farms) of the province's registered beef farms participated. This group accounted for more than 50 per cent ($15.1 million) of Statistics Canada's gross value of cattle sales in Nova Scotia. Total program payments were $618,000.
- Provided accurate cost-of-production information and analytical support to the Pork Risk Management Service (RMS). Pork producers experienced a disastrous year in 1998 due to an influx of product onto the North American market and low commodity prices. Payments to producers totalled $7.8 million in 1998, including a $3.5-million loan from the Province. The Province, producers, and processors make contributions to RMS. Contributions from the province totalled $1.3 million in 1998–99. A review of RMS methodology was also undertaken with Pork Nova Scotia.
- Provided $4.2 million in assistance to 1020 projects (534 clients) through the Agri-Focus 2000 Farm Development Program.
- Funded 60 projects, for a total of $740,000, through the Agri-Focus 2000 Technology Development Program. The program was revised to include more industry involvement in setting priorities.
- Funded 69 projects for a total of $493,000 through the Agri-Focus 2000 Marketing and Human Resource Development Program.
- Provided $77,000 in support of department/industry research institutes.
- Provided $194,000 to 302 farms purchasing 27,700 tons of lime through the Agricultural Limestone Assistance Program.
- Examined the Agricultural Income Disaster Assistance (AIDA) Program to assess its responsiveness to the farm income crisis in Nova Scotia.

Results of the review were used as the basis for determining federal credits for provincial program expenditures and to strengthen Nova Scotia's position in national post-1999 safety net discussions. Safety nets are programs designed to provide income stability to producers during low-income years. The programs are funded 60 per cent by the federal government and 40 per cent by provincial governments.

- Provided support to farmers to deal with the impacts of severe dry weather. Reinstated a toll-free forage-listing service, posted agricultural-related weekly weather summaries on the Internet, published crop-specific newsletters, and provided specialized advice to farmers. Announced a $20 million five-year drought relief program to begin in 1999–2000. The program will provide farmers who lost money because of drought with assistance to reduce interest and principal on loans taken out to offset wather-related losses. It was developed in consultation with the Nova Scotia Federation of Agriculture.

- Developed a joint position on Nova Scotia's safety net needs with the Nova Scotia Federation of Agriculture. Negotiations will begin with the federal government in 1999–2000 for the next safety net agreement to cover 2000–05.

- Formed the Program Review and Planning Committee with the Nova Scotia Federation of Agriculture to develop a replacement for the Agri-Focus 2000 Farm Development Program. Developed a draft Agri-Business Development Program for discussion with industry.

- Began key initiatives to strengthen business management development and planning in the agri-food industry, including assisting the Wild Blueberry Growers Association of Nova Scotia in developing a five-year strategic plan; forming a department team to assist the potato processing industry in developing and implementing a new industry strategy; and forming the Agricultural Roundtable Human Resource Committee to address regional harvest labour issues.

- Assisted in the development of the first provincial Roundtable on Agricultural Business Innovation in Kentville on April 15, 1999.

- Contributed $565,000 to the Apple Industry Development Fund in partnership with the federal government as a result of terminating the Apple Tripartite Stabilization Program. The fund is administered by the Nova Scotia Tree Fruit Research Foundation, with department representation, and is used to fund projects that will enhance the ability of Nova Scotia's apple industry to compete in the domestic and international marketplace. In 1998–99, 32 of the 41 applications received were funded for a total of $361,196.

- Held a two-day Agricultural Trade Issues Seminar in preparation for World Trade Organization negotiations. The Nova Scotia Agricultural Trade Group was formed to identify and promote Nova Scotia's interests in the pending round of negotiations.

- Conducted a number of regional trials in cereals, soybeans, and corn in cooperation with the Nova Scotia Crop Development Institute and with funding from the Agri-Focus 2000 Development Program and Grain and Forage Nova Scotia. The trials provided sound data to recommend new cultivars for both registration and production.

- Formed a working group with the Nova Scotia Agricultural College to investigate the growing of industrial hemp, a crop that became legal to grow in Canada under licence from Health and Welfare Canada in March 1998. A marketing study on industrial hemp was jointly funded with the New Brunswick Department of Agriculture and Rural Development. A small adaptive research project was initiated and the quality of oil produced from the seed was evaluated.

- Formed partnerships with community economic development organizations in Guysborough County to jointly investigate commercial development of foxberries.

- Participated in the Cranberry Team with the Nova Scotia departments of the Environment and Natural Resources. Members worked on several initiatives, including the development of a Cranberry Industry Development Program, Cranberry Equity Fund, and Wetland Evaluation Screening Tool and organized a second Cranberry Management Course. Other activities included organizing an information session in Shelburne and facilitating environmental impact assessments for proposed developments on six wetlands.

- Hired a business analyst to conduct a needs assessment and develop an upgraded Farm Registration System to improve program design, increase access to aggregate farm data and facilitate Internet-based farm registration.

- Drafted amendments to the Imitation Dairy Act and Margarine Act to comply with Licences, Permits and Applications Task Force recommendations. Amendments were passed in 1998–99. Regulations respecting the Chicken Marketing Plan, Imitation Dairy Products and Livestock Health Services Acts were also amended.

- Conducted client needs assessments in Hants West, Antigonish/Guysborough, and Yarmouth/Shelburne counties, focusing on department programs and services.

- Developed an aggressive market research program that resulted in total funding of $294,000. Over 75 per cent of the projects were initiated as partnerships with industry and other public sector agencies. Completed projects include: Nova Scotia Food Processing Benchmark and Issues Oriented Study; Benchmark Study of the Nova Scotia Food Consumer; Taste of Nova Scotia Focus Group Research on Quality and Packaging; and A Situational Analysis of the Nova Scotia School Milk Program. The Hemp Market Research Report, Estonian Investigative Mission Project Report, Opportunities for Organic Produce in New England, and Marketing Management System Prototype were published.

- Organized two missions to the Caribbean focusing on the sale of technologies, skills, and abilities and resulting in the development of proposals for the following projects: Barbados/Nova Scotia 4-H Re-development; Caribbean Regional Organic Development; and Barbados Strawberry Development. Completed the Report on the Agricultural Investigative Mission to the Caribbean.

- Coordinated the promotion of provincial agri-food products at a series of international and national food shows including one mission to the Caribbean in March 1999, which resulted in estimated sales of $350,000. Other shows attended included Natural Products Expo East in Baltimore, Maryland; North American Farmers Direct Marketing Conference in Grand Rapids, Michigan; Canadian Food and Beverage Show in Toronto; the Canadian Produce Marketing Association Show in Quebec; and ApEx and Northern Bounty III in Halifax.

- Eliminated duplication and increased efficiencies by initiating testing of food safety samples through quality evaluation services labs.

- Assumed responsibility for the administration of food shop licensing as part of the department's quality evaluation services. The change lowered administrative costs and made the system more responsive to client inquiries and needs.

- Implemented a lab information management system for the department's veterinary diagnostic lab, making lab results more accessible to clients and enabling better management of livestock disease statistics within the province. The new system made data available electronically and generated user-friendly lab reports for clients.

- Provided market information to the agri-food industry including a revamped "Market Report" with an enhanced monthly market information component. Also made weekly price information available electronically and revised the report "Marketing via the Internet."

- Enhanced and increased information available to clients on the Internet. For example, increased the amount of information posted by Production Technology Branch on the department's website by 36 per cent and saw a 41 per cent increase in the number of hits on the branch's pages; established an Internet-based farm business management resource library for clients; continued development of enhanced 4-H information as part of the Rural Leadership Branch site, including daily coverage of the National Citizenship Seminar.

- Continued participation in and funding of the Maritime Beef Development and Marketing Group. This group continues to develop strategic partnerships with Co-op Atlantic and selected food service operators to assure market access for Maritime beef on a fair pricing basis.

- Completed a number of initiatives in partnership with Agriculture and Agri-food Canada, the Federal/Provincial Market Council, the Federal/Provincial Committee on Investment, Trade Team Nova Scotia and the Nova Scotia Department of Fisheries and Aquaculture. Projects completed include: Canadian International Business Strategy for Agriculture and Agri-Food; Federal/Provincial Priority Markets Initiative and Work Plan; and Nova Scotia Regional Trade Plan. Also developed the Nova Scotia Food Group and the Atlantic Export Club.

- Funded the Nova Scotia School Milk Program at a cost of $391,494. Approximately 4.9 million servings of milk were served to school-aged children, similar to the level of consumption in 1997–98. The program was initiated in 1974 to promote milk consumption in provincial schools and provide milk at a subsidized rate to Nova Scotia school children.

- Worked with a team lead by the Canadian Pork Council on the Canadian Quality Assurance Program. The program is based on the Hazard Analysis Critical Control Point (HACCP) model, an internationally accepted food safety assurance system. Although originally developed for the food processing industry, the principles are being applied at each stage in the producer-to-consumer chain. The main focus of the program will be drug residue prevention and proper injection techniques. The program will consist of a manual containing proper production practices and an on-farm assessment form completed in conjunction with a certified validator.

- Initiated development of a Best Management Practices/HACCP publication for dairy producers to assist them in developing or refining systems for producing high quality raw milk and meat products from dairy cows.

EDUCATION AND LIFELONG LEARNING

- Implemented a policy at the Nova Scotia Agricultural College (NSAC) granting students with a two-year technical diploma in agriculture at least 10 credits toward a Bachelor of Science degree in Agriculture (B.Sc. (Agr)). Special articulation plans were also developed for students in landscape programs at the Nova Scotia Community College and the New Brunswick Community College to allow them advanced standing in the Landscape Horticulture Technology program at the NSAC.

- Offered three NSAC first-year B.Sc. (Agr) agriculture courses by distance education allowing students to complete the first-year program at a university or college near their home.

- Partnered with Acadia University's Small Business Centre and the Canadian Farm Business Management Council to adapt the Small Business Counselor Program to the agricultural sector.

- Partnered with local Federations of Agriculture and county agricultural awareness committees to provide information about agriculture at local exhibitions, including the AgCot Discovery Centre at the Atlantic Winter Fair. Also developed an agriculture-related board game for school-aged children and a teachers' resource kit.

- Partnered with Ross Farm Museum and the Museum of Natural History to develop programs and exhibits that depict the evolution of agriculture to reach an expanded audience for agricultural awareness initiatives.

- Formed a partnership with the Nova Scotia Department of Education through the Nova Scotia Agriculture Awareness Committee to develop Grade 11 agri-science curriculum to be piloted in selected high schools across the province in autumn 1999.

- Organized the three-day workshop Managing Market Risk Through Futures and Options. The 25 participants were primarily from the hog sector. Also funded an investigative trip to Manitoba and Ontario for members of Pork Nova Scotia to research alternatives for implementing futures and options for Nova Scotia producers.

- Offered a variety of degree, short professional upgrading, and custom-designed courses, as well as certificate programs, through the NSAC's Centre for Continuing and Distance Education. In 1998–99, the Centre offered 132 courses that provided training for 1168 individuals. In addition, there were 11 new projects utilizing distance education technology in partnership with other agencies and organizations.

- Implemented new programs at the NSAC, including the Agricultural Business major under the B.Sc. (Agr) program. An entrepreneurship course was also introduced and made available to all students.

- Launched the Marketing Management Project in August 1998. A prototype market information system was pre-tested with industry and government clients. Overall response was excellent. A series of 10 market information and education modules will be developed based on a client needs assessment undertaken in early 1998.

- Developed "Business Cent$", a new chapter for 4-H leader manuals on starting a small business. This was developed in cooperation with the Nova Scotia Association of Community Business Development Centres and complemented sessions on entrepreneurship that were conducted at a 4-H workshop.

- Held the annual Nova Scotia Young Farmer's Conference in Antigonish, February 11–13. The theme of the conference was Success in Agri-Business. Two 4-H staff were co-chairs for the event, which 75 young farmers attended.

- Provided skills training to the province's 3000 4-H members and adult volunteer leaders. Also developed a screening program for new and existing 4-H leaders.

- Developed 4-H promotional kits for use by clubs in each county across the province.

- Worked closely with county 4-H Councils to organize the Nova Scotia 4-H Provincial Show held October 2-4. This annual event attracts approximately 10,000 4-H members, leaders, and members of the general public.

- Co-sponsored the New Exporter Training Program (NEXPRO) in March 1999. Twenty government and industry representatives participated in the program, an international trade training program consisting of 10 workshops and 40 hours of one-on-one consultation with industry participants. Upon completion of the program, participants had an export plan for their business. The program was sponsored by the department, the Taste of Nova Scotia Quality Food Program, and the Canadian Business Development Bank.

- Developed new publications to encourage business planning skills in the industry, including "Construction Management Guide for Farm Business," "Equity Financing Guide for Nova Scotia Farms," "Reading Financial Statements Guide," and "Six Steps to Succession Planning for Nova Scotia Farm Businesses."

- Recorded a 30 per cent increase in the level of research funding garnered by faculty at NSAC to support student assistantships and additional research projects.

- Attracted approximately $2 million in support of NSAC research initiatives.

Funding Source

Department of Agriculture and Marketing (Agri-Focus Program)	$567,070.00
Natural Sciences and Engineering Council	$349,546.76
Social Sciences and Humanities Research Council	$12,128.00
Grants in aid*	$592,888.08
Other Government Sources (DFO, AAFC, NB & PEI)	$322,295.71
Institutes (CDI, APRI, Fur)	$145,943.92
Total	$1,989,872.47

** Sources include Stella Jones, Zeneca, Canadian Seed Growers Association, J. W. Mason & Sons, Nova Scotia Milk Producers Association, Cumberland County Soil & Crop Improvement Association, NS Tree Fruit Foundation.*

- Offered approximately $398,500 in scholarships, bursaries, and prizes to 253 NSAC students. New awards this year included Dr. Chesley E. Smith Memorial Graduate Scholarship, Canard Conservation Graduate, and the Canard Conservation Undergraduate scholarships, The Canadian Association of Agri-Retailers Bursary, Hill's Pet Nutrition (Canada) Inc. Small Animal Nutrition Prize, Kings Mutual Insurance Scholarship, George and Lottie Cook Memorial Scholarship, and The Novartis Award.

- Increased international exposure of NSAC and Nova Scotia's agri-food industry through the NSAC International Centre by involving students, staff, and faculty in various international projects. In 1998, trips were made to Panama, Ghana, Colombia, Brazil, Mexico, the Gambia, Malawi, the Phillippines, the West Indies, and Estonia. The operation of the International Centre is fully supported by external grants and contracts.

- Received an honourable mention in the Curriculum Change Category of the Scotiabank-AUCC Awards for Excellence in Internationalization for the NSAC's Island Food Systems Course. The course is part of the NSAC's commitment to developing specialized courses to aid in the internationalization of NSAC's students and staff.

- Increased NSAC recruitment efforts, visiting over 160 high schools in the Atlantic provinces, including additional independent visits to high schools and pre-tech programs within the community college system. An NSAC promotional video was developed and given to each high school visited. Also developed an NSAC/4-H Newsletter for all Atlantic provinces targeted at senior members within each provincial program and secured booth space at the Nova Scotia and Newfoundland 4-H Shows.

- Continued to increase employment activity coordinated through the NSAC Career Services Office. The number of jobs posted through the office increased for the fourth consecutive year in 1998–99. In its twice-yearly survey of NSAC graduates, the office reported the level of graduates employed or pursuing further study within six months of graduation has remained constant at 90 per cent.

- Established the department's Year 2000 Extension Awareness Team in August 1998 to develop and coordinate the implementation of an extension education strategy to help clients in the agri-food industry prepare for the Year 2000 (Y2K) problem. The team was composed of department extension specialists and a representative of the Nova Scotia Federation of Agriculture. A Y2K Tool Kit was prepared and a comprehensive media and promotion strategy was developed and implemented.

- Trained over 4,000 professional and volunteer food handlers through food-handler training courses to promote proper food handling with the emphasis on reducing the risk of food-borne illnesses.

- Continued to promote farm safety by working directly with farm equipment dealers; promoting tractor and equipment safety at exhibitions; holding first-responder courses to promote early assistance in the event of an accident; and developing radio ads to create awareness of farm equipment on highways. Also worked with Women's Institutes of Nova Scotia and equipment dealers in the development of a farm safety day camp held in October 1998.

RESOURCE STEWARDSHIP

- Began work on a draft land-use strategy by establishing an Agricultural Land Policy Committee with the Nova Scotia Department of Housing and Municipal Affairs. A province-wide inventory of agricultural land use with corresponding maps was completed and published in 1998 and distributed to cooperating agencies and municipalities. Conversion of hardcopy dykeland maps to electronic format, Geographical Information Systems (GIS), was also completed.

- Reviewed resource-based legislation, including the Ditches and Water Courses Act and the Fences and Detention of Stray Livestock Act, with the recommendation to repeal the Ditches and Water Courses Act at a future date.

- Signed a new Livestock Health Services Agreement with the Nova Scotia Veterinary Medical Association in July 1998 that covers the future operation of the province's Livestock Health Services Program. The agreement creates new standardized practice zones based on livestock census numbers, not municipal government boundaries.

- Worked closely with the Nova Scotia Federation of Agriculture Agri-Environmental Research Committee to plan and develop priorities for the province's Agri-Environmental Research Program. Produced a comprehensive report titled "Environmental Research Program — 1998–99" detailing program projects and findings. The report was produced in hard copy and electronically on the department's website.

- Continued to work with the Municipality of East Hants and local producers to resolve issues regarding establishment of a well water supply for Shubenacadie. An ad hoc committee was established to resolve issues in the area.

- Visited over 50 farms to provide information and advice on issues such as erosion, earthen manure storage, surface water diversion, drainage, and wetlands. Staff also responded to farm-related environmental complaints, as necessary. The majority of complaints were odour and water contamination issues related to manure.

- Developed a report titled "Siting and Management of Hog Farms in Nova Scotia (1998)" in cooperation with Pork Nova Scotia, the Nova Scotia Federation of Agriculture and the Nova Scotia departments of the Environment and Housing and Municipal Affairs. The report was produced in hard copy and electronically on the department's website.

- Developed a policy on Recommended Agricultural Practices within Designated Protected Water Areas with the cooperation of the Nova Scotia departments of the Environment and Health and the Nova Scotia Federation of Agriculture. The report was produced in hard copy and electronically on the department's website.

- Worked in cooperation with the Growers Water Group to begin investigating reliable water sources for irrigation of horticulture crops. Several short- and long-term studies are planned for the future to assess water supply and demand and to plan for future development.

- Established a working group to draft a Farm Practices Act to replace the current Agricultural Operations Act. The new act will protect farmers following approved farming practices from civil action. This legislation is considered a priority by the Nova Scotia Federation of Agriculture.

- Developed the teacher's resource guide "Agriculture — A Good Growing Environment," aimed at teaching third- and fourth-grade students about sound environmental practices on the farm. The guide was piloted in Mabou in 1998–99. Staff presented the concept at the Agricultural Awareness Conference in Truro and at the Agricultural Institute of Canada conference in Vancouver.

- Amended the Marshland Reclamation Act to enhance authority for the management of agricultural lands in marsh sections.

- Developed applied research in on-farm water quality management in cooperation with a number of commodity organizations. The research focused on identifying economically viable techniques, such as alternative cattle watering and milkhouse waste water treatment systems, that can be readily adapted by farmers to manage and maintain on- and off-farm water quality.

- Investigated the impact of various common manure management practices on the environment. Tested on-farm manure treatment technologies, including constructed wetlands, composting, and mechanical/chemical treatment techniques for their efficacy in treating manure wastes.

- Established a working group in cooperation with the Nova Scotia Federation of Agriculture to facilitate the on-farm implementation of the Environmental Farm Plan, an environmental audit program.

- Participated in provincial steering committees on climate change and state-of-the-environment reporting.

RESOURCES CORPORATE SERVICES UNIT

The mission of the three divisions of the Resources Corporate Services Unit is to foster a corporate approach to information technology, human resources, and financial services delivery within departments of Agriculture and Marketing, Environment, Fisheries and Aquaculture, and Natural Resources, and the Petroleum Directorate and Emergency Measures Organization.

INFORMATION TECHNOLOGY DIVISION

This division provides client access to information technology (IT) resources that lead to: technology-based solutions to support and enhance business delivery and technically appropriate network and computer desktop services. Division accomplishments for 1998–99 include:

- Funded, in partnership with the department's Agricultural Development Division, an IT position to provide assistance in the development of enhancements and improvements to the farm registration system.
- Assisted the Farm Loan Board in finding a replacement for existing computer systems supporting the board's loan management and fire insurance functions.
- Initiated implementation of the department's and NSAC's Year 2000 Strategy. Hired a full-time Year 2000 Project Manager and assigned IT staff full time to Year 2000 responsibilities in line with department priorities. The Client Service Co-ordinator was also assigned full time to the Year 2000 Project. The process to establish and maintain IT priorities within the department was suspended until after completion of the Year 2000 Project. New servers were installed in Kentville and Truro, providing significant improvement in service to staff.
- Provided webmaster and design assistance to the department and NSAC websites. Oversaw the separation of the formerly integrated website to create two separate sites. Department and NSAC staff began assuming responsibility for content, design, and webmaster duties. CSU staff continue to provide web-based technical support, training, and consultation services. Also implemented a firewall to provide security to the department's information assets from external sources via the Internet.

- Provided access to the Central Financial Management System to specific department and NSAC staff outside the CSU Finance Division.

- Completed implementation of a Veterinary Diagnostics Laboratory Information Management System. The new system streamlines the processing of test samples and invoices. The elimination of manual invoices and reports reduces the costs associated with increasing filing space. On-line access to multiple years of test results will provide a comprehensive database for statistical analysis.

- Implemented server upgrades and installed software to allow the NSAC to deliver distance education courses via the Internet.

HUMAN RESOURCES DIVISION

This division provides client departments with professional human resources services including compensation, human resources advisory services, labour relations, occupational health and safety, organizational design, training and development, payroll/benefits, and recruitment.

As of March 31, 1999, there were 484 full-time equivalents in the Department of Agriculture and Marketing, with staff located in 13 offices across the province. There were five civil service appointments over the year. There were four retirements, including three under the Early Retirement Incentive Program. One employee took advantage of the Early Departure Incentive Program. Division accomplishments for 1998–99 include:

- Delivered training programs to a total of 393 employees at the request of various departments. In addition, 104 participants attended courses offered in the "CSU Training and Development Calendar," including a Supervisory Development Program delivered regionally.

- Provided introductory training to 191 employees about the new performance management process as part of the Human Resources CSU's responsibility for providing required training for the implementation of the Integrated Management Development Project.

- Organized 47 training events to provide six courses required by client departments to meet their obligations under the Occupational Health and Safety Act. A total of 1349 participants from client departments attended.

FINANCIAL SERVICES DIVISION

This division provides support to the four resource departments in the areas of accounting systems, procurement, licences and accounts receivable, revenues, fees and recoveries, budget preparation and analysis, and financial analysis and advice on special projects. Division accomplishments for 1998–99 include:

- Achieved budget and forecast information deadlines required internally for senior management, as well as external deadlines required by the Department of Finance.
- Provided a comptroller function on behalf of the resources departments, agencies, and the Department of Finance. Also provided financial information to assist in complying with the Expenditure Control Act. In 1998–99, the division administered 113,860 transactions totalling approximately $44 million.
- Collected and reported on approximately $12.9 million in revenue for the four resources client departments.
- Processed registration of 827 students as the business office for the Nova Scotia Agricultural College, and administered the NSAC Research Grant Funds totalling $1,823,389.

FINANCIAL OVERVIEW

Nova Scotia Department of Agriculture and Marketing 1998-99

Branch	Gross Ordinary Expenditures
Senior Management	$2,442,157.95
Agricultural Development	$12,642,485.51
Rural Leadership	$2,376,646.46
Marketing and Food Industry Development	$1,451,567.44
Resource Stewardship	$1,512,499.69
Quality Evaluation	$4,760,514.88
Production Technology	$3,875,267.70
Provincial Grain & Forage Commission	$16,000.00
Dairy Commission	$287,787.92
Beef Commission	$26,157.78
Community Pastures	$164,178.69
Natural Products Marketing Council	$14,034.21
Crop & Livestock Insurance Commission	$694,112.78
Land & Credit Services	$953,039.25
Loss Provision Program	$3,059,463.71
Nova Scotia Agricultural College	$17,102,466.14
Total Gross Ordinary Expenditures	**$51,378,380.11**
Ordinary Recoveries	**($15,751,880.14)**
Net Ordinary Expenditures	**$35,626,499.97**
Revenue	**($277,803.45)**

TABLES

Nova Scotia Apple Crop Estimate

	1997 Bushels	1998 Bushels	%Change from 1997	5-year Average
Apples	2,364,000	2,200,000	-6.9	2,483,800
Gravenstein	150,000	170,000	13.3	160,000
McIntosh	870,000	850,000	-2.3	892,000
Cortland	300,000	220,000	-26.7	334,000
Red Delicious	150,000	130,000	-13.3	168,000
Spy	200,000	220,000	10	220,000
Spartan	50,000	50,000	0	50,000
Idared	90,000	100,000	11.1	78,000
Others	554,000	460,000	-17	581,400

Berry Crop Yields and Value – 1998

Fruit/Plants	Acres	Yield	Unit Price($)	Value ($)
Strawberries (quarts)	775	3,490,000	1.45	5,062,500
Certified Strawberry Plants	200	33,330,000	0.11	3,604,000
Cranberries (pounds)	46	594,000	1.72	1,020,000
Highbush Blueberries (pints)	130	570,000	1.78	1,015,000
Raspberries (pints)	130	211,500	1.82	385,000
Certified Raspberry Canes	8.5	306,810	0.35	107,400
Grapes (tonnes)	150	240	840	201,600
TOTAL	**1439.5**			**11,395,000**

Production and Farm Value of Commercial Vegetables in 1998

	Acres	Hectares	Tons	Tonnes	Value
Asparagus	*	*	*	*	*
Beans	340	138	400	363	250,000
Beets	60	24	140	127	150,000
Broccoli	520	210	1,263	1,145	885,000
Brussels Sprouts	*	*	*	*	*
Cabbage	385	156	3,900	3,538	1,185,000
Carrots	1,840	745	42,020	38,121	4,685,000
Cauliflower	220	89	1,100	998	760,000
Celery	5	2	*	*	*
Cucumbers	100	40	720	653	330,000
Lettuce	170	69	1,598	1,449	985,000
Dry Yellow Onions	500	202	13,990	12,892	2,520,000
Parsnips	70	28	200	181	250,000
Green Peas	1,130	457	2,348	2,130	525,000
Peppers	25	10	65	59	75,000
Pumpkin	175	71	1,128	1,023	205,000
Radish	5	2	2	2	3,000
Rutabagas & Turnips	310	125	3,203	2,905	1,025,000
Green Onions	25	10	130	118	102,000
Spinach	*	*	*	*	*
Squash/Zucchini	225	91	1,110	1,007	535,000
Sweet Corn	580	235	930	844	410,000
Tomatoes	90	36	473	429	300,000
Totals	**6,775**	**2,740**	**74,720**	**67,984**	**$15,180,000**

** not reported*

Three-year Summary of Analytical Laboratories Sample Numbers

Soil Samples	**1996**	**1997**	**1998**
Field	6,608	6,717	8,976
Greenhouse	502	619	645
Total	7,110	7,336	9,621

Feed Samples	**1996**	**1997**	**1998**
Hay	303	264	270
Forage	779	737	1,117
Hayiage	1,149	984	956
Mixed Feed	1,440	1,476	1,289
Grain	388	274	316
Mink and Fox	58	62	101
Other	142	155	170
Total	4,259	3,952	4,219

Water Samples	**1996**	**1997**	**1998**
Agricultural	1,221	970	234
Domestic	944	842	648
Environment	116	202	62
Industry	229	318	759
Municipal	5	9	18
Transportation	712	166	159
Total	3,227	2,507	1,882

Tissue Samples	**1996**	**1997**	**1998**
Commercial & Research	1,438	1,714	2,179
Total	1,438	1,714	2,179

SUMMARY	**1996**	**1997**	**1998**
Soil	7,110	7,336	9,621
Feed	4,259	3,952	4,219
Water	3,227	2,507	1,882
Tissue	1,438	1,714	2,179
Total	**16,034**	**15,509**	**17,901**

Servings under School Milk Program

	1995–96	1996–97	1997–98	1998–99
Total	**6,160,511**	**5,463,857**	**4,944,856**	**4,940,203**

NSAC student enrollment and graduates by program, 1998–99

	Enrollment	Graduates
Degree	592	121
Technician	105	30
Technology	145	54
Other	0	(Engineering Diploma)10
Graduate	40	12
Total	**882**	**227**

College Farm - Summary of crops grown and yields for 1998–99

Crop	Yield
Canola	2.5 tonnes
Dry Barley	18.5 tonnes
High Moisture Barley	35.5 tonnes
Winter Wheat	9.5 tonnes
Summer Wheat	32 tonnes
Soybean	10 tonnes
Grass Legume Silage	903 tonnes
Corn Silage	150 tonnes
Hay	11,667 bales
Straw	2,782 bales

College Farm — Livestock Inventory for 1998–99

Dairy	Cows	Heifers 1yr+	Heifer Calves	bull calves	Total
Apr–98	40	12	16	3	71
Mar–99	37	17	12	0	66

Beef	Cows	Heifers	Feeders	*Research	Total
Apr–98	22	0	23	19	64
Mar–99	0	0	0	30	30

Sheep	Ewes	Rams	Yearlings	Lambs	Total
Apr–98	104	22	54	147	327
Mar–99	104	27	0	105	236

Foxes	Females	Males	Pups	Research	Total
Apr–98	51	16	3	0	70
Mar–99	35	14	18	0	67

Marten	Females	Males	Kits	Research	Total
Apr–98	8	8	9	0	25
Mar–99	8	11	7	0	26

Mink	Females	Males	Kits	Research	Total
Apr–98	40	12	0	80	132
Mar–99	40	12	0	126	178

Poultry	Fancies	Layers	Broilers	Other	Total
Apr–98	443	2505	1377	346	4671
Mar–99	497	2216	0	471	3184

Swine	Sows	Gilts	Boars	Feeders	Total
Apr–98	36	18	4	292	350
Mar–99	32	4	3	310	349

LEGISLATION

The following is a list of all Acts and Regulations under the Nova Scotia Department of Agriculture and Marketing.

Agricultural Operations Protection Act
Agriculture and Marketing Act and Regulations
- Agreements of the Nova Scotia Agricultural College Regulations
- Agricultural Fairs and Exhibitions Regulations
- Apple Maggot Control Board Regulations
- Beef and Veal Carcass Grading Regulations
- Commodity Group Designations and Levies Order
- Community Pastures Regulations
- Contagious Diseases Among Bees Regulations
- Dressed and Eviscerated Poultry Regulations
- Hog Carcass Grading Regulations
- Improvement of Livestock Breeding Regulations
- Lamb and Mutton Carcass Grading Regulations
- Nova Scotia Fresh Fruit and Vegetable Regulations
- Nova Scotia Hatchery and Flock Approval Policy Regulations
- Packaged Apples Controlled Atmosphere Designation Regulations
- Regulations Respecting the Grading, Packing, Marking, Inspecting, Advertising and Sale of Eggs
- San Jose Scale Control Regulations
- Wool Inspection, Grading, Marking and Selling Regulations

Agriculture and Rural Credit Act
- Nova Scotia Farm Loan Board Regulations

Animal Cruelty Prevention Act
Animal Health and Protection Act and Regulations
Baby Chick Protection Act
Bee Industry Act and Regulations
- Bee Quarantine Declaration
- Diseases and Pests Affecting Bee Regulations

Beef Commission Act
Cattle Pest Control Act
Cold Storage Plants Loan Act and Regulations
Crop and Livestock Insurance Act
- Arbitration Proceedings Regulations
- Beef Cows and Calves Designation
- Dairy Cattle Designation
- Livestock Insurance Plan for Beef Cow and Calf Diseases
- Livestock Insurance Plan for Dairy Livestock Diseases
- General Field Crop Insurance Regulations
- Crop Insurance Plan for Blueberries
- Crop Insurance Plan for Corn (Grain, Silage)

- Crop Insurance Plan for Forage
- Crop Insurance Plan for Peas and Beans
- Crop Insurance Plan for Potatoes
- Crop Insurance Plan for Soybeans
- Crop Insurance Plan for Spring Grain
- Crop Insurance Plan for Strawberries
- Crop Insurance Plan for Tree Fruit
- Crop Insurance Plan for Tree Insurance (apple and pears)
- Crop Insurance Plan for Winter Grain

Dairy Commission Act and Regulations

- Schedule 1 - General Regulations
- Schedule 2 - Milk Production Regulations
- Schedule 3 - Grading, Packaging and Sale of Dairy Products Regulations
- Schedule 4 - Manufactured Dairy Products Regulations
- Schedule 5 - Milk Transportation Regulations
- Schedule 6 - Milk Producers' Financial Equalization Regulations
- Schedule 7 - Bulk Milk Haulage Rates Regulations
- Schedule 8 - Regulations for Specified Areas
- Schedule 9 - Milk Prices for Specified Areas Regulations
- Schedule 10 - Total Production Quota Regulations
- Schedule 11 - Quota Conversion Regulations
- Schedule 12 - Goat Milk Production Regulations

Deer Farming and Marketing of Deer Products Regulations *(Wildlife Act)*

Farm Registration Act and Regulations

Fences and Detention of Stray Livestock Act

Food Safety Regulations *(Health Act)*

- Counter Freezers Regulations
- Eating Establishments Regulations
- Milk Production, Transportation and Pasteurization Regulations
- Vending Machine Regulations for Perishable Goods
- Various regulations established by municipalities on mobile food shops, eating establishments, bakeries and sale of food

Game Farming Regulations *(Wildlife Act)*

Grain and Forage Commission Act

- Purchase Sale and Distribution of Grain Regulations
- Rates for Drying, Storage, Grading and Handling Grain Regulations

Imitation Dairy Products Act and Regulations

Livestock Brands Act

Livestock Health Services Act and Regulations

Livestock Loans Guarantee Act and Regulations

Margarine Act and Regulations

Maritime Provinces Harness Racing Commission Act

Marshland Reclamation Act and Regulations

- Bishop-Beckwith Marsh Body Land Use Regulations
- Dentiballis Marsh Body Land Use Regulations
- Grand Pre Marsh Body Land Use Regulations
- Wellington Marsh Land Use Regulations

Meat Inspection Act and Regulations
Natural Products Act

- Chicken Marketing Board Regulations
- Chicken Marketing Plan
- Egg and Pullet Producers Marketing Board:
- Composition of Marketing Board Regulations
- Egg and Pullet Producers Marketing Plan
- Egg Regulations and Levies Orders
- Pullet Regulations
- Flue-Cured Tobacco Growers' Marketing Board Regulations
- Flue-Cured Tobacco Growers' Marketing Plan
- Grain Marketing Board Regulations
- Grain Marketing Plan
- Greenhouse Vegetable Marketing Board Licence Regulations
- Greenhouse Vegetable Marketing Board Pricing Regulations
- Greenhouse Vegetable Marketing Plan
- Pork Marketing Plan
- Pork Nova Scotia Regulations
- Potato Marketing Levy Regulations
- Potato Marketing Licence Regulations
- Potato Marketing Plan
- Processing Pea and Bean Growers' Marketing Board Regulations
- Processing Pea and Bean Marketing Plan
- Quorum of the Nova Scotia Marketing Board
- Turkey Producers' Marketing Board Regulations
- Turkey Marketing Plan
- Wool Marketing Board Regulations
- Wool Marketing Plan

Potato Industry Act and Regulations
Provincial Berry Act
Sheep Protection Act
Weed Control Act and Regulations

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